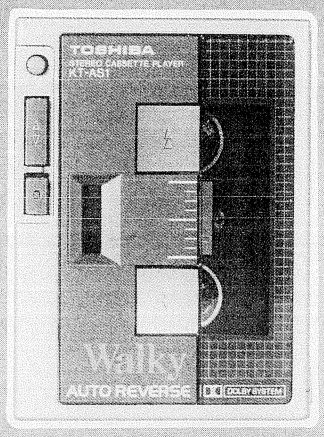
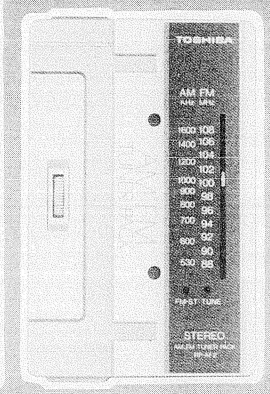
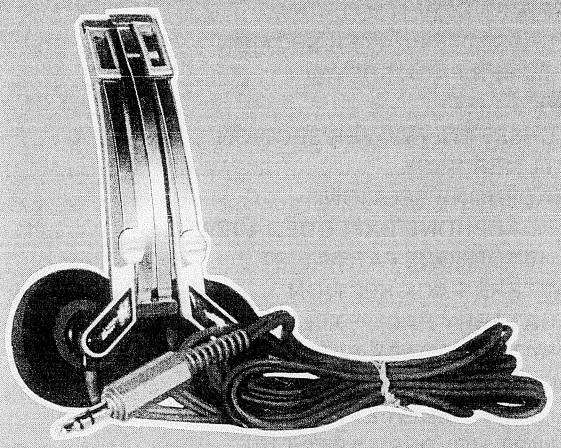
TOSHIBA

STEREO CASSETTE PLAYER

KT-AS1 (RP-AF2)







For Parts replacement in Tuner Pack, model RP-AF2, which is optional for KT-AS1 of "FY" version, refer to pages 22 to page 23 in this Service Data.

SPECIFICATIONS

■ Tape Section

Track system:	Stereophonic
Recommended tape:	Normal ferric, chrome dioxide, and metal alloy: C-30 to C-120
Tape speed:	4.8 cm/sec.
Frequency response:	Reproduction: 40 Hz to 14 kHz (Normal), 40 Hz to 16 kHz (Metal)
Output terminals:	3.5 mm dia. stereo headphone jack x 2
Maximum output power:	Integration 40 mW (20 mW +20 mW) with 32 ohm load
Power supply:	3V DC (SUM-3 "AA" x 2) External power source supplied to the [DC IN 3V] jack (3.4 mm dia. center contact negative)
Dimensions:	80.5(W) x 108(H) x 29.5(D)mm
Weight:	290 g (including batteries but not the tuner pack)

■ Tuner Section

Receiving frequency:	FM: 88 MHz to 108 MHz AM: 525 kHz to 1605 kHz

- This FM/AM tuner pack (RP-AF2) is designed exclusively for this unit and KT-VS1, and is not usable in other types of cassette recorders.

Specifications are subject to change without notice.

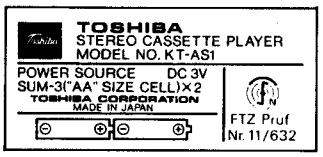
TA, TC, AY, YY, FY

1014

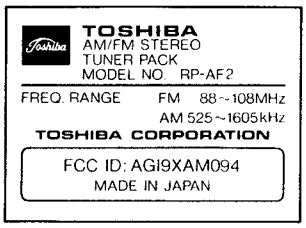
PRINTED IN JAPAN 22905170 Feb., 1983 (S)

CONTENTS

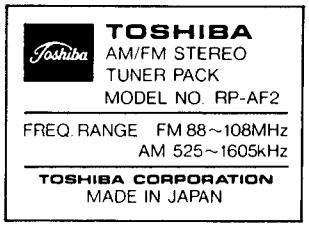
Name Label (KT-AS1)



Name Label (RP-AF2)
(TA, TC)



Name Label (RP-AF2)
(YY, AY)



1. OPERATING CONTROLS

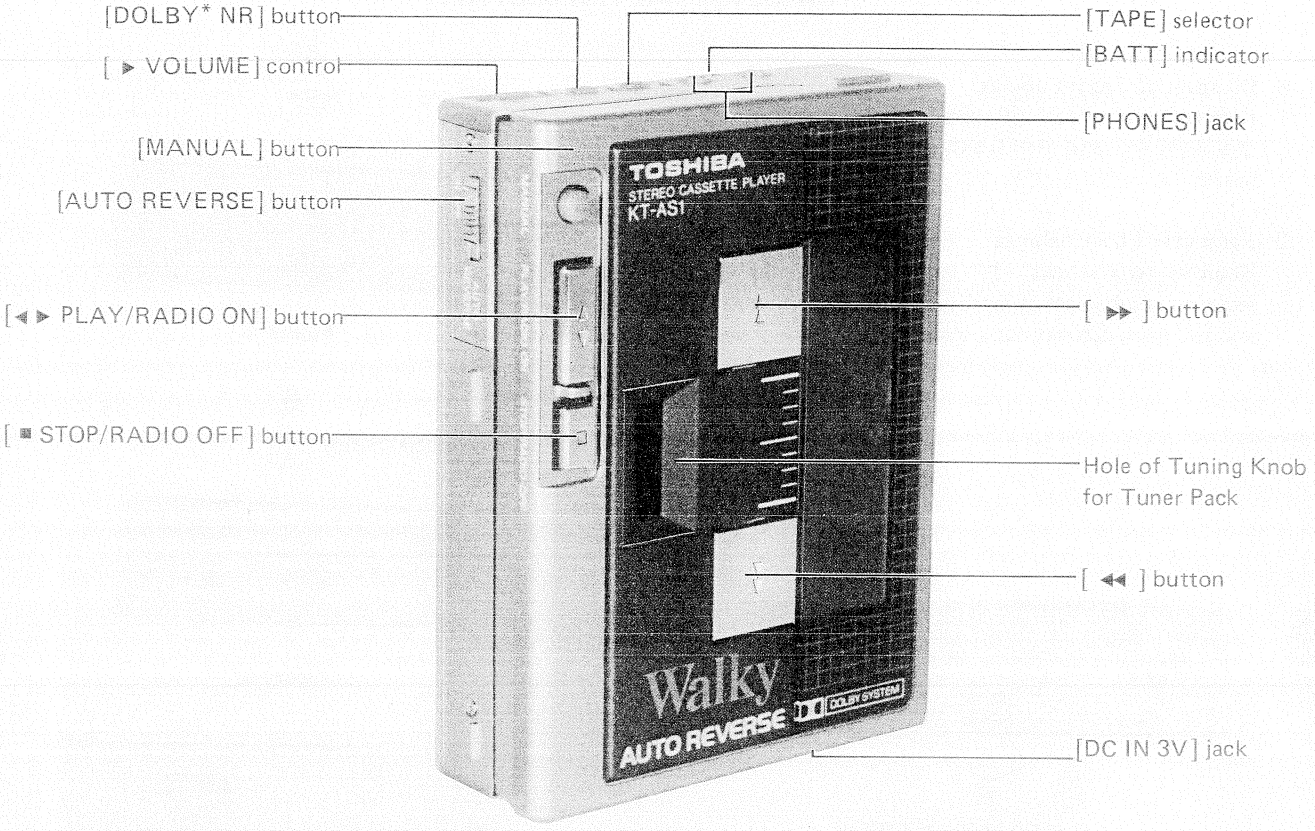


Figure 1

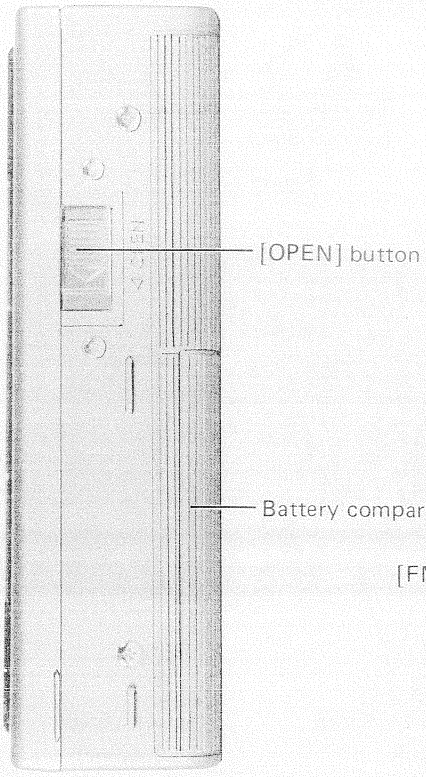


Figure 2

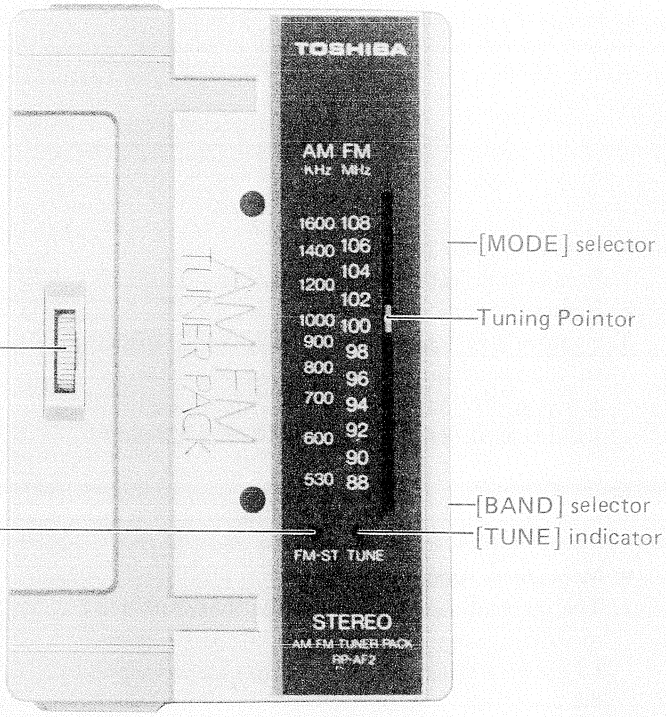


Figure 3

2. DISASSEMBLY INSTRUCTIONS

— CASSETTE PALYER SECTION —

■ **Removal of Front Cabinet**

1. Remove two screws Ⓐ provided at both front cabinet sides and the front cabinet will be removed.

2. Removal of back cabinet
   Remove two screws Ⓑ and two screws Ⓒ securing mechanism assembly to the back cabinet, and the back cabinet will be removed.

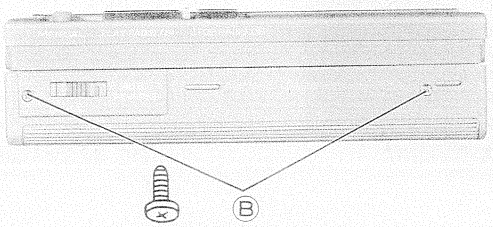


Figure 5

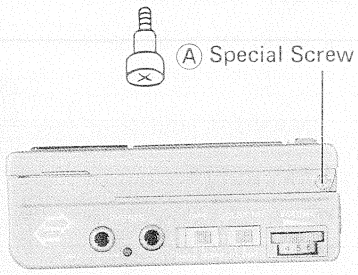


Figure 4

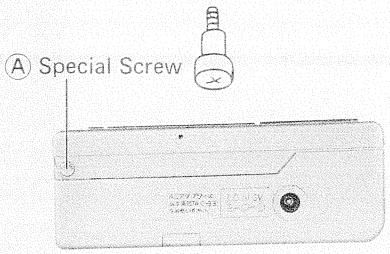


Figure 6

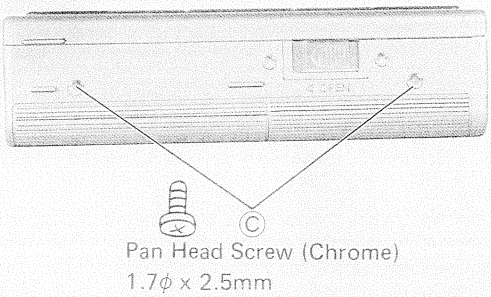


Figure 7

■ **Access to Main P.C. Board**

1. Remove the front cabinet.
2. Remove the back cabinet.
3. Remove two screws Ⓓ securing the P.C. Board to the mechanism assembly and one screw Ⓔ securing the motor control P.C. Board, and the front side of the main P.C. Board can be checked.

■ **Mechanism Assembly Check**

1. The mechanism assembly is provided beneath the main P.C. Board, so open the P.C. Board as started above and then the mechanism can be checked.

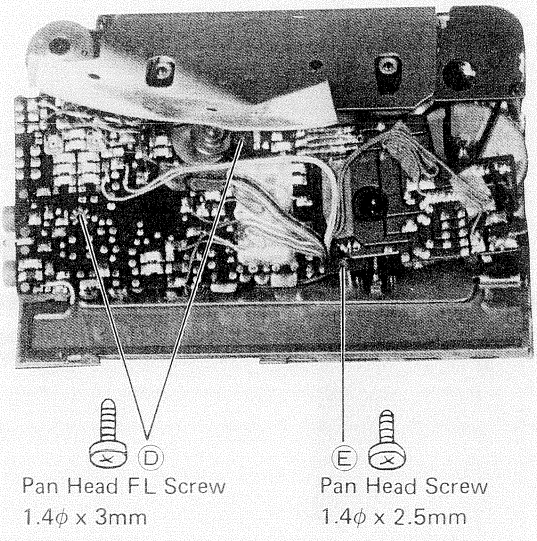


Figure 8

— TUNER PACK SECTION —

■ **Removal of Upper Cabinet**

1. Remove four screws Ⓕ securing bottom cabinet, and the upper cabinet will be removed.

■ **Access to P.C. Board**

1. Remove the upper cabinet.
2. Remove adhesive tape securing AM antenna coil to the bottom cabinet and release the coil, taking care not to broken wire leads connected to the P.C. Board.
3. The P.C. Board can be opened and accessed. (Refer to "Tuner Pack Check".)

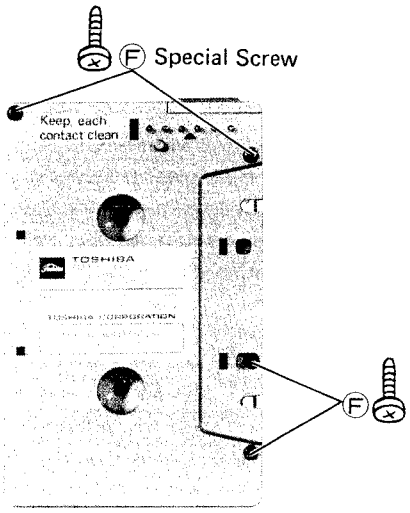


Figure 9

■ **TUNER PACK INSPECTION**

When repairing the tuner pack, inspect it according to the following procedures.

1. Remove two special screws from the front cabinet side of the cassette player and then remove the front. (Figure 10)
2. Load the tuner pack from which the upper cabinet is removed, into the cassette holder. (Figure 11)
3. Set the cassette player and the tuner in the play mode. In this case, insert a insulator packing between the cassette holder and the tuner pack in order for the connector not to detach from the cassette player. (Figure 12)
4. It is possible to inspect the rear side of the P.C. Board as shown in Figure 13.

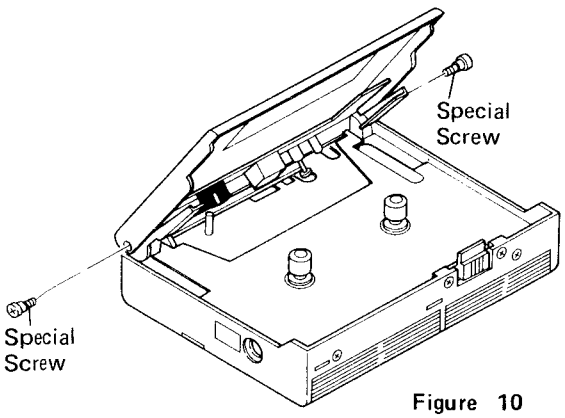


Figure 10

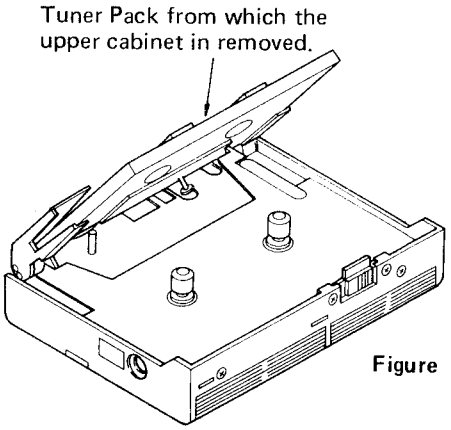


Figure 11

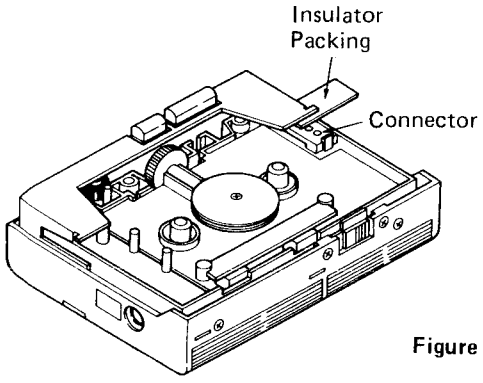


Figure 12

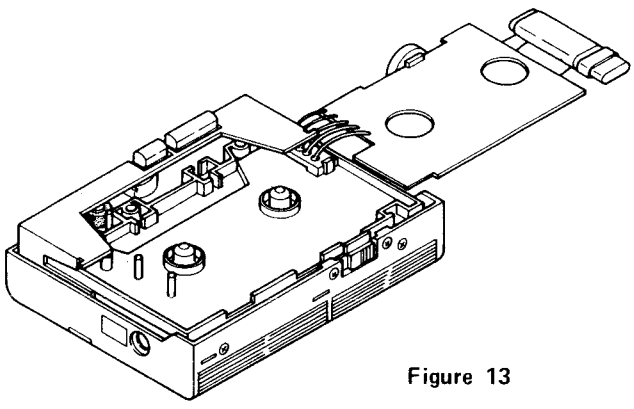


Figure 13

3. DIAL CORD RESTRINGING

■ **DIAL CORD STRINGING**

Replace the dial cord according the following procedures.

1. Turn the tuning knob counterclockwise fully (to the direction of lower frequency).
2. Wind the dial cord in numerical order.
3. Fix the dial pointer on the cord so as to fit the pointer margin to the marking line on the mould frame.

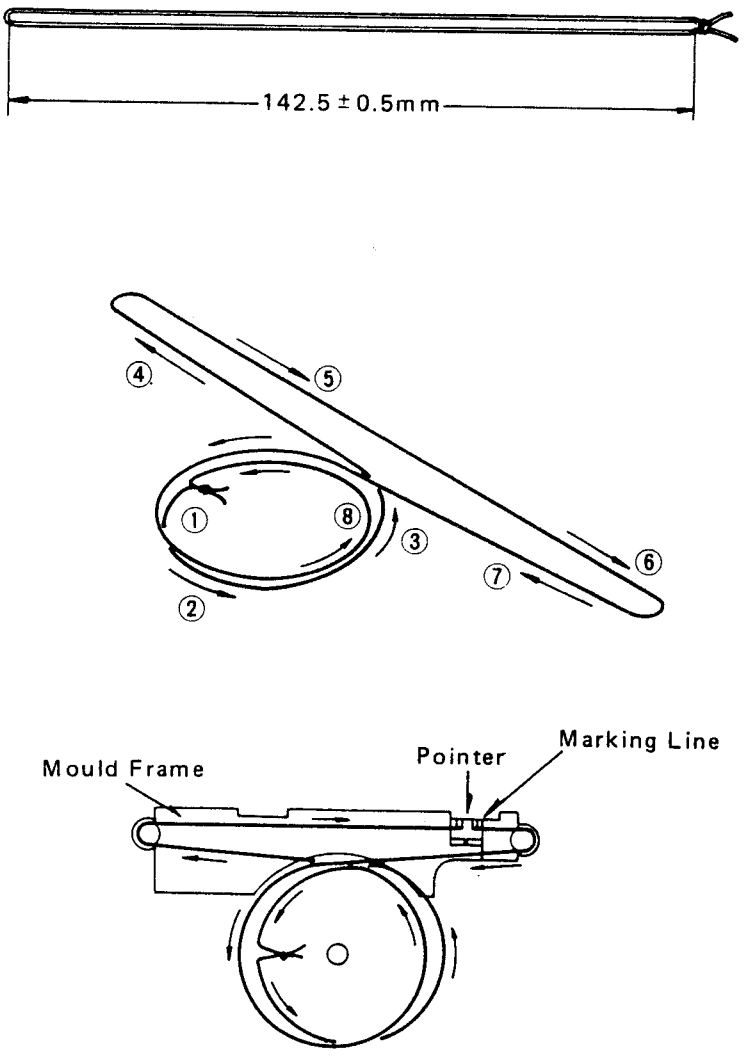


Figure 14

4. CHIP PARTS REPLACEMENTS

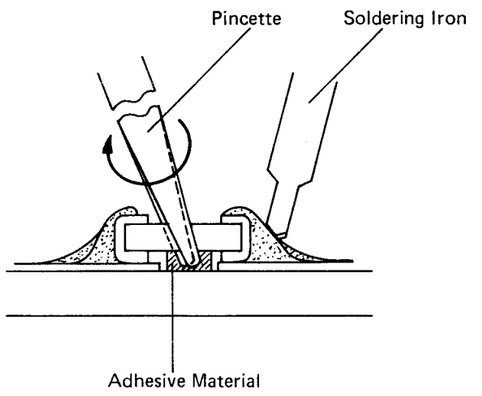


Figure 15

Unsoldering ICs and Other Semiconductor Tips

1. Hold the part as its center with pincette, etc. and apply heat at soldered section (a) and (b) alternatively with soldering iron tip. Remove the part by moving it to left and right while the solder does not harden.

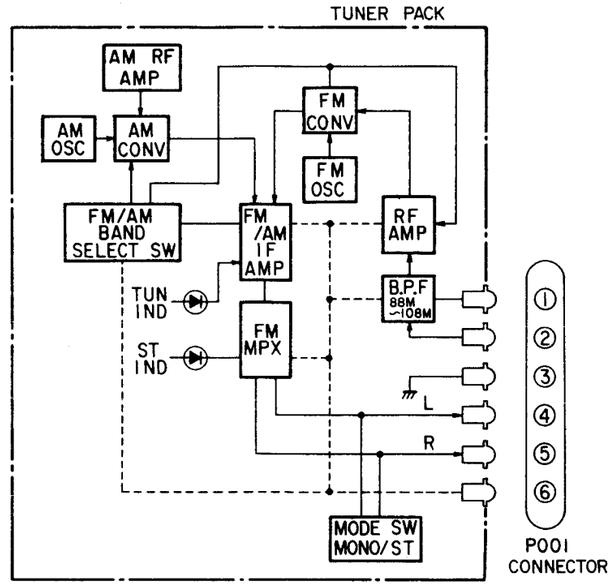
2. Cut or broken the part at it center with a diagonal cutter and remove by unsoldering each terminal of the part.

Note: Parts removed by the method 2 above can not be reused. Transistors removed by the method 1 above amy be reused if they are removed carefully with less heat applied.

- **Torque**
  PLAY : Approx. 28 – 52g.cm
  FF : Approx. 60g.cm
  REW : Approx. 60g.cm

- **Power Consumption**
  TAPE : Approx. 115mA (C-60, center position, vol-min)
  FM : Mono approx. 50mA (vol-min)
  Stereo approx. 53mA (vol-min)
  AM : Approx. 42mA (vol-min)

5. BLOCK DIAGRAM



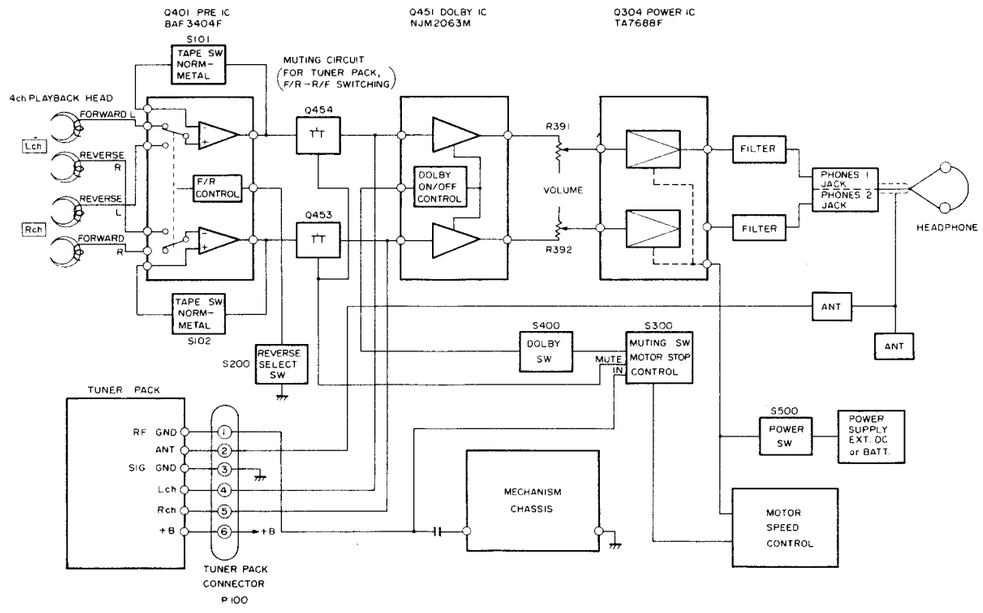


Figure 16

6. ALIGNMENT INSTRUCTIONS

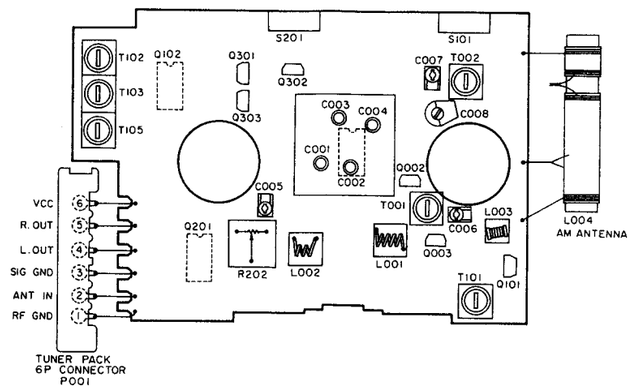


Figure 17

AM-IF ALIGNMENT

1. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded lead to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Proceed as outlined in the AM-IF ALIGNMENT CHART.

AM-IF ALIGNMENT CHART

Step	Signal Coupling	Equip.	Tuning	Connection	Adjust. Point	Pattern
1	Connect sweep generator output to a loop antenna.	Sweep generator of 455 kHz center freq. with 455 kHz marker. (YY ... 460 kHz)	Tuning Knob fully counter-clockwise (Highest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	T102 T104	Adjust coil T102 and T104 until the best single peak is obtained.

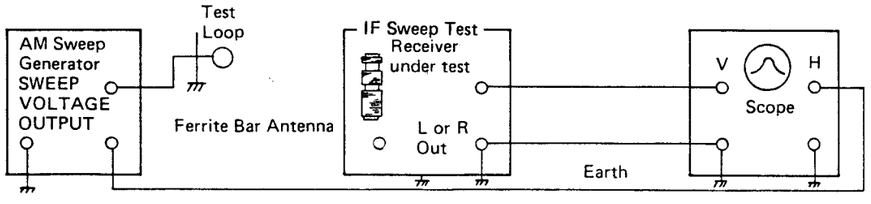


Figure 18

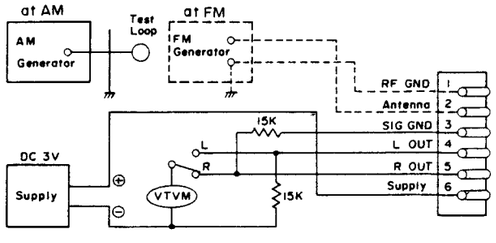


Figure 19

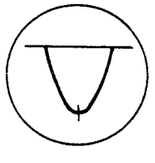


Figure 20

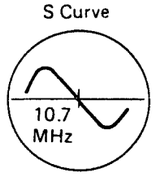


Figure 21

AM ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

AM ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	520 kHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil T102	Adjust for maximum output indication.
2	1650 kHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim C007	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	600 kHz	Tune to signal.	Ant. Coil L004	Adjust for maximum output indication.
5	1400 kHz		Ant. Trim. C008	
6	Repeat steps 4 and 5 as required.			

FM-IF ALIGNMENT

1. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
2. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
3. Connect the oscilloscope vertical input directly to the test point L or R and connect the shielded load to the test point Earth.
4. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
5. Process as outlined in the FM-IF ALIGNMENT CHART.

FM-IF ALIGNMENT CHART

Step	Signal coupling	Equip.	Tuning	Connection	Adjust. point	Pattern
1	Connect sweep generator output to a three-turn loop antenna of 10 cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz meter.	Tuning Knob fully counter-clockwise (Highest Frequency)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" sweep generator output to horizontal axis "H".	T101 T103	Turn the coil T103 fully counterclockwise to obtain a single peak. Fig. 20 Adjust coil T101 in order until the best single peak is obtained. Finally turn the coil T103 to obtain S curve. Fig. 21

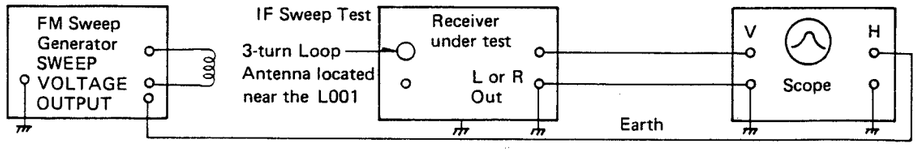


Figure 22

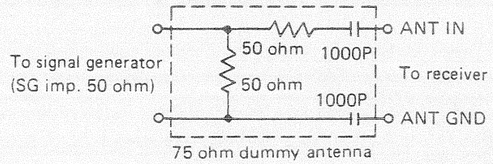
FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across a 15K ohm dummy load.
4. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
5. Proceed as outlined in the FM-RF ALIGNMENT CHART.

FM-RF ALIGNMENT CHART

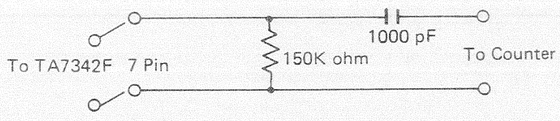
Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.5 MHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil L002	Adjust for maximum output indication.
2	108 MHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim C005	Adjust for maximum output indication.
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal.	RF Coil L001	Adjust for maximum output indication.
5	106 MHz		Ant. Trim. C006	
6	Repeat steps 4 and 5 as required.			

CAUTION: When realigning the FM Receiving Frequency, the highest end of the frequency range should not be more than 108 MHz and the lowest end of the frequency range should not be less than 87.5 MHz, in order to comply with FTZ regulations in West Germany.



FREE RUN FREQUENCY ALIGNMENT

Adjust R202 under no signal condition so as to obtain 76 kHz ±150 Hz.



PLAYBACK HEAD ADJUSTMENT

A 6.3 kHz standard tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the EXT Speaker jack and adjust the azimuth by using a phillips screwdriver to maintain the maximum output voltage. Fig. 23.

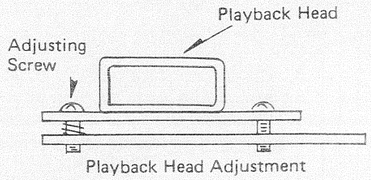


Figure 23

DOLBY LEVEL ADJUSTMENT

1. Preliminary Work
   1) Place function switch in "NORMAL" poaition.
   2) Place Dolby switch in "IN" position.
   3) Load MTT-150 (ATT-150) 400 Hz test tape.
   4) Connect a lead (terminated with alligator clip) of VTVM to Dolby output terminal and another lead to chassis ground.
2. Level Adjustment
   1) Playback the test tape.
   2) Adjust trimming pot semi-fixed resistor R491 (Lch), R492 (Rch) until output reading of 100mV ±8mV is obtained on the level meter, using alignment driver. (Proceed this alignment for both left and right channels.)

Note: When connecting alligator clip to the output terminal, clip it to a lead of C457 (Lch), C458 (Rch) (film type capacitor).

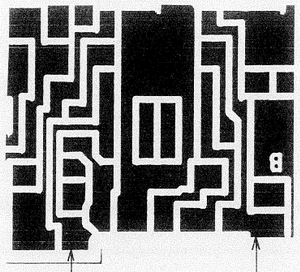


Figure 24

7-1. ELECTRICAL PARTS LOCATIONS

— CASSETTE PLAYER SECTION TOP VIEW —

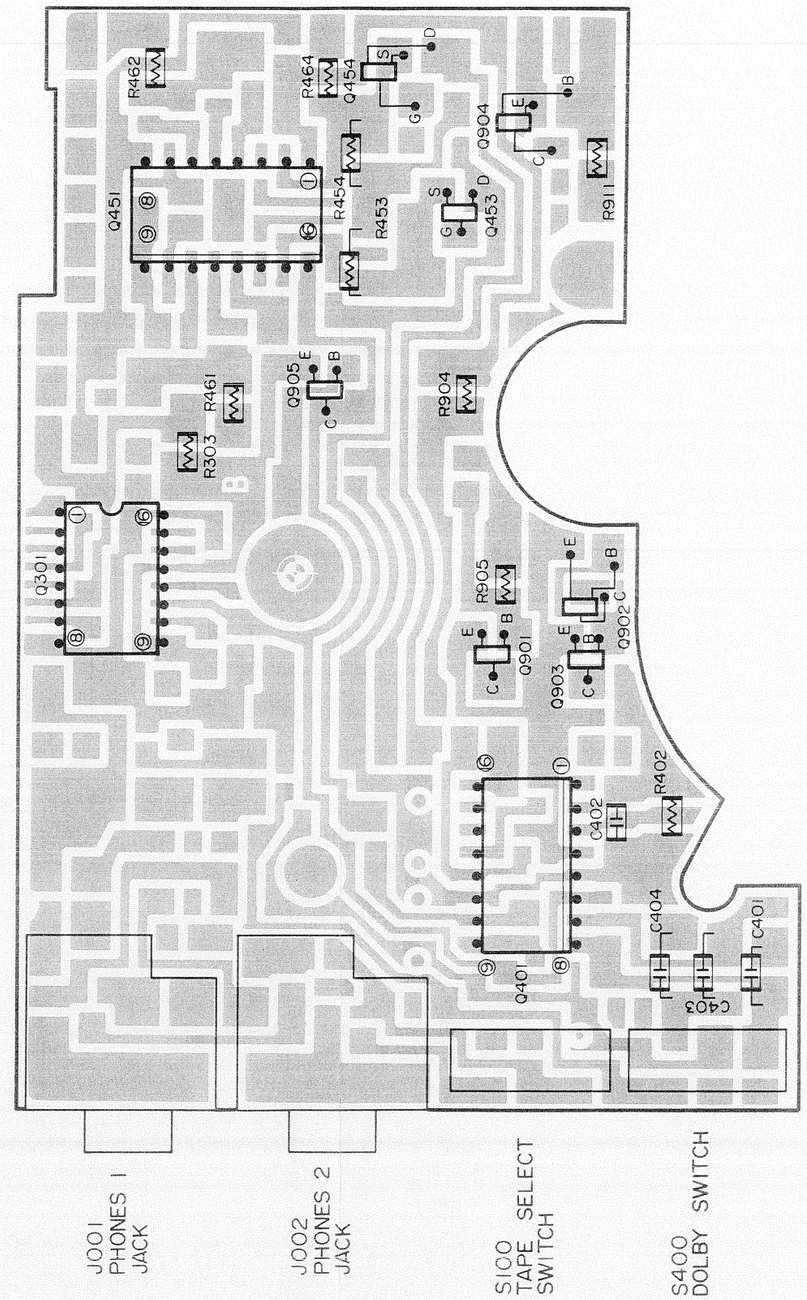
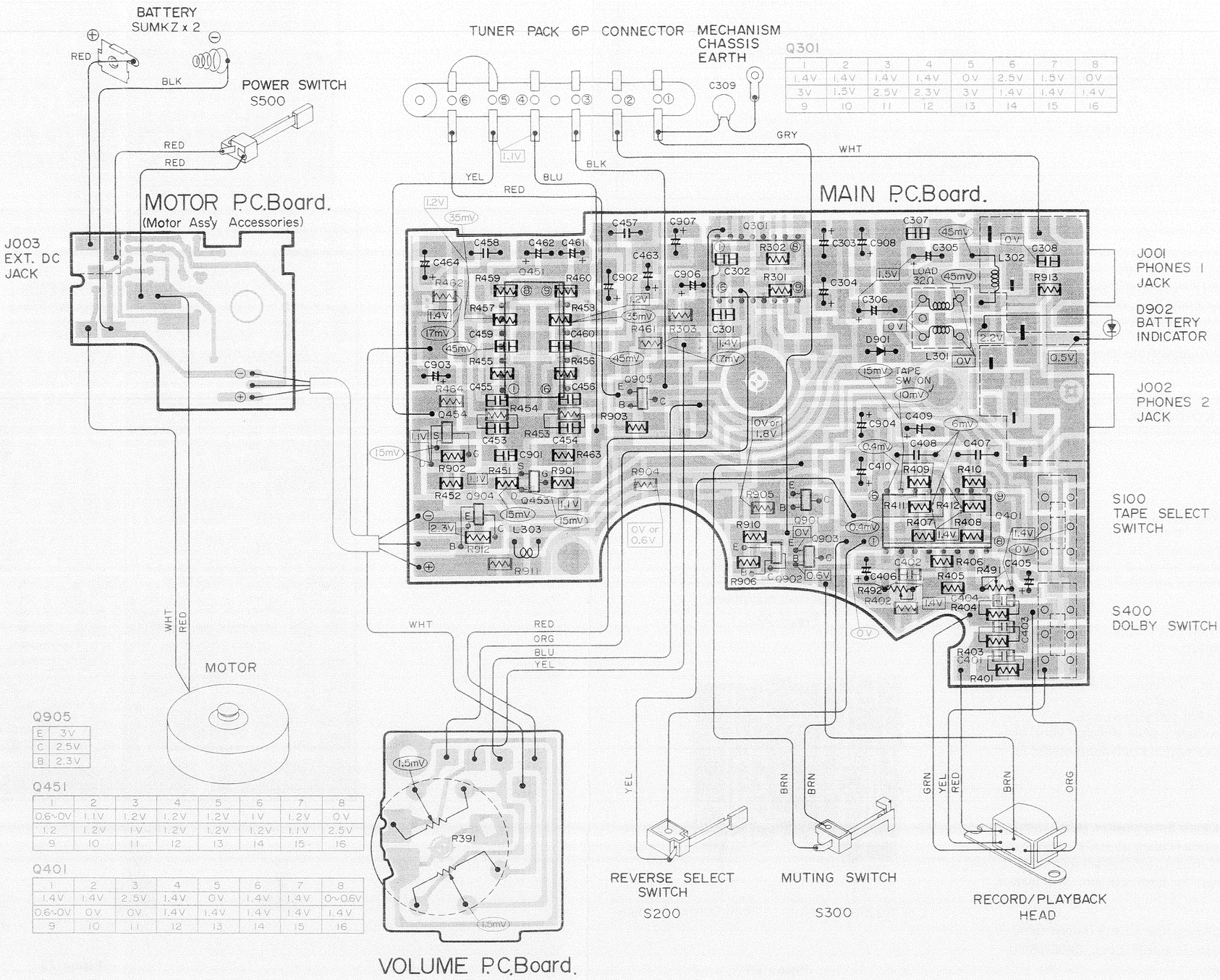


Figure 25

7-2. ELECTRICAL PARTS LOCATIONS

— CASSETTE PLAYER SECTION —



Q301

1	2	3	4	5	6	7	8
1.4V	1.4V	1.4V	1.4V	0V	2.5V	1.5V	0V
3V	1.5V	2.5V	2.3V	3V	1.4V	1.4V	1.4V
9	10	11	12	13	14	15	16

Q905

E	3V
C	2.5V
B	2.3V

Q451

1	2	3	4	5	6	7	8
0.6~0V	1.1V	1.2V	1.2V	1.2V	1V	1.2V	0V
1.2	1.2V	1V	1.2V	1.2V	1.2V	1.1V	2.5V
9	10	11	12	13	14	15	16

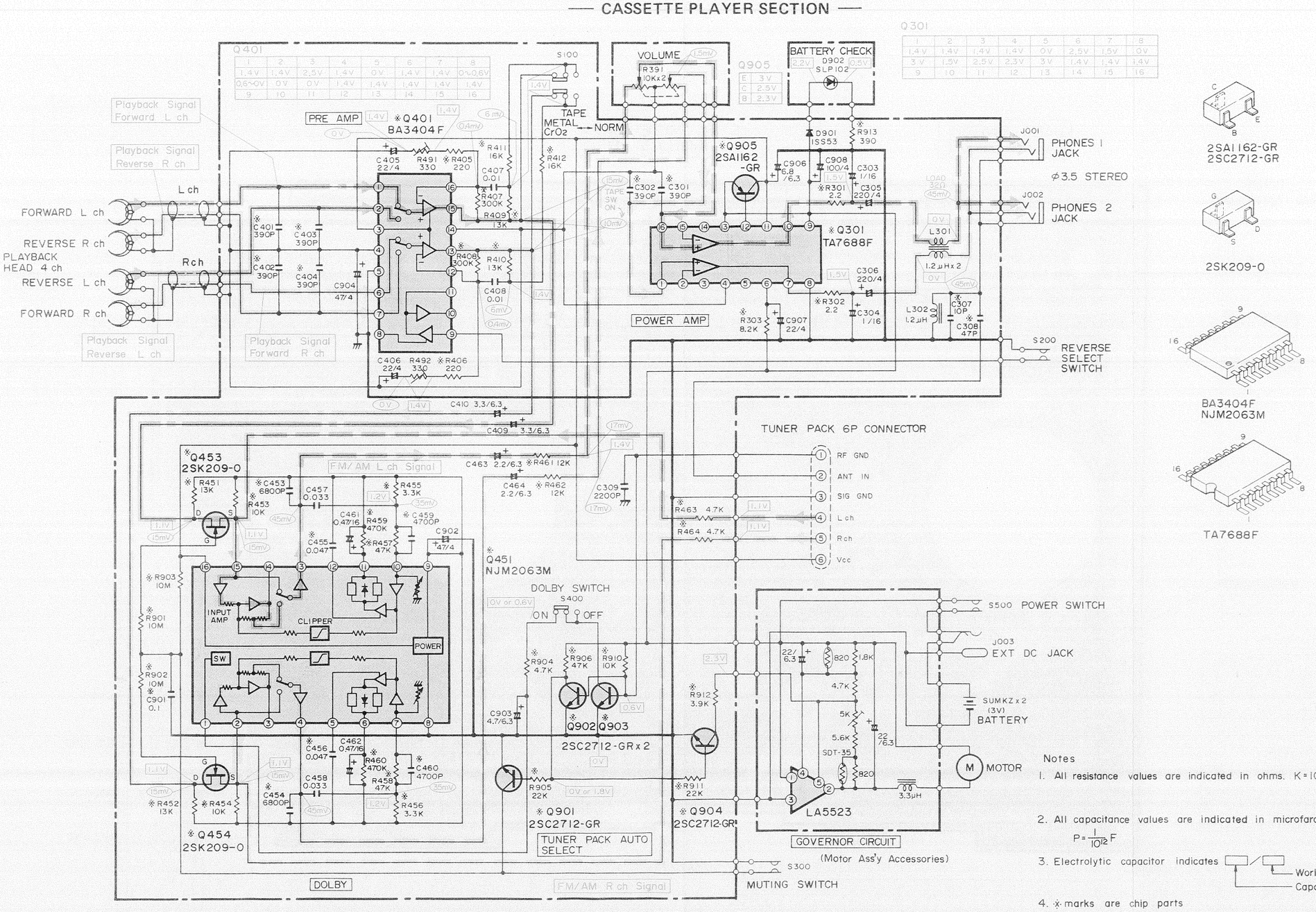
Q401

1	2	3	4	5	6	7	8
1.4V	1.4V	2.5V	1.4V	0V	1.4V	1.4V	0~0.6V
0.6~0V	0V	0V	1.4V	1.4V	1.4V	1.4V	1.4V
9	10	11	12	13	14	15	16

Figure 26

8-1. SCHEMATIC DIAGRAM

— CASSETTE PLAYER SECTION —



2SA1162-GR
2SC2712-GR

2SK209-0

BA3404F
NJM2063M

TA7688F

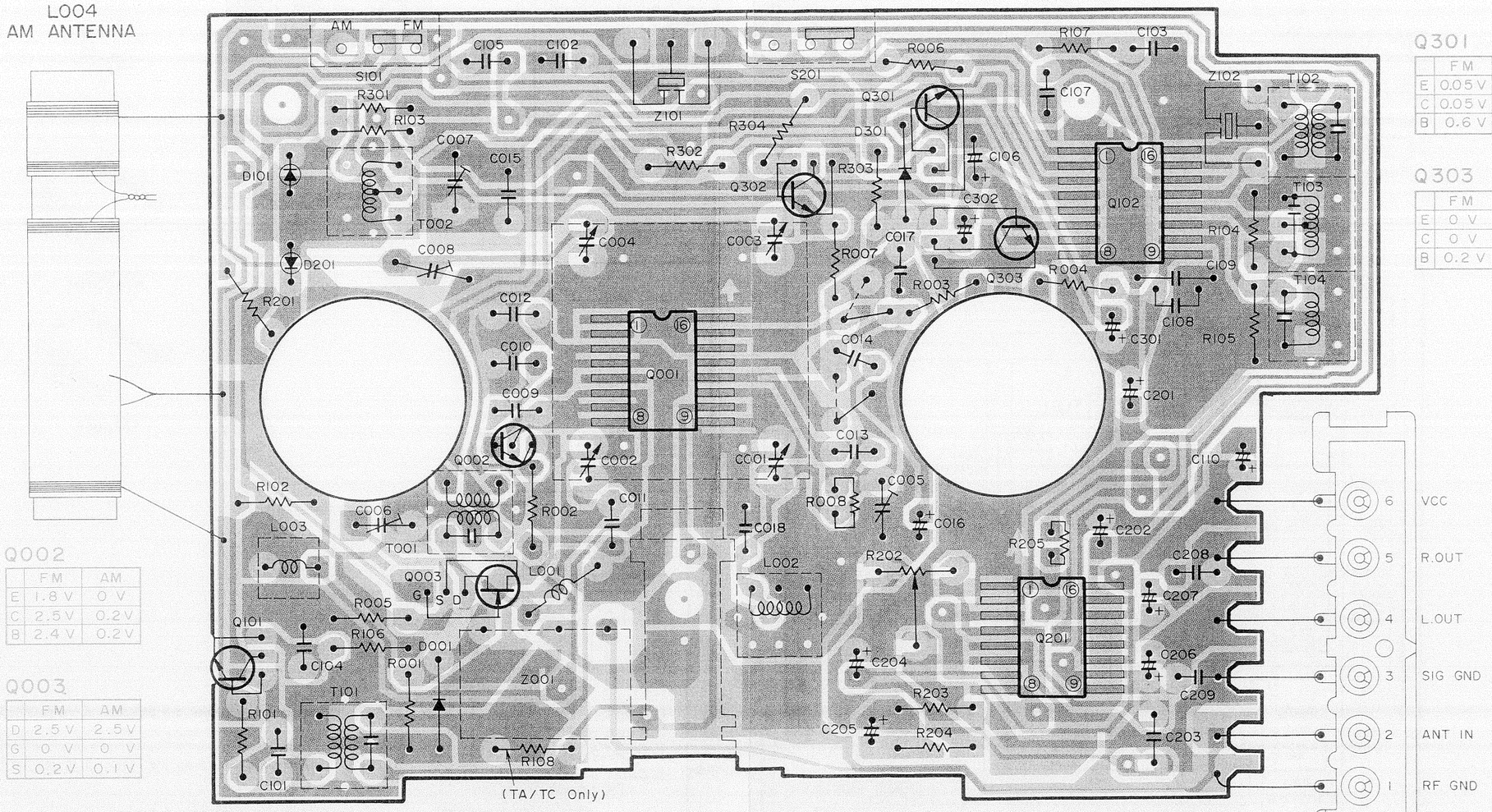
Notes

1. All resistance values are indicated in ohms. K=1000 Ω
2. All capacitance values are indicated in microfarads.
   $P = \frac{1}{10^{12}} F$
3. Electrolytic capacitor indicates — Working Voltage (V) / Capacitance (μF)
4. ·*· marks are chip parts
5. Voltages in ◯ are AC values measured with digital voltmeter while test tape ATT-111 (3KHz) is being reproduced. Input ... 100KΩ TAPE switch (S100) in OFF

Figure 27

7-3. ELECTRICAL PARTS LOCATIONS

— TUNER PACK SECTION —



Q102

	1	2	3	4	5	6	7	8
FM	0.05V	0.05V	2.5V	1.4V	1.4V	0.1V	1.5V	0V
AM	0.9V	0.9V	0.2V	1.4V	1.4V	0V	2.4V	0V
FM	0.9V	2.5V	2.5V	2.5V	2.2V	2.2V	2.2V	2.5V
AM	1.1V	2.5V	2.5V	2.5V	2.1V	2.2V	2.4V	2.5V
	9	10	11	12	13	14	15	16

Q302

	FM	AM
E	0V	0V
C	0.05V	1.7V
B	0.6V	0.2V

Q301

	FM	AM
E	0.05V	1.7V
C	0.05V	1.7V
B	0.6V	2.2V

Q303

	FM	AM
E	0V	0V
C	0V	0V
B	0.2V	0.6V

Q002

	FM	AM
E	1.8V	0V
C	2.5V	0.2V
B	2.4V	0.2V

Q003

	FM	AM
D	2.5V	2.5V
G	0V	0V
S	0.2V	0.1V

Q101

	FM	AM
E	0.8V	0.2V
C	2.4V	0.2V
B	1.3V	0.7V

Q001

	1	2	3	4	5	6	7	8
FM	0V	1.7V	2.5V	2.5V	1.7V	2.5V	2.5V	2.5V
AM	0V	0V	0.2V	0.2V	0V	0.2V	0.2V	0.2V
FM	0V	2.5V	0V	2.2V	0V	0V	0.3V	0V
AM	0V	0.2V	0V	0.2V	0V	0V	0.4V	0V
	9	10	11	12	13	14	15	16

Q201

	1	2	3	4	5	6	7	8
FM	2.5V	2.5V	2.1V	2.1V	0V	0V	1.5V	1.7V
AM	2.5V	2.5V	1.8V	1.8V	0V	0V	1.8V	2.5V
FM	0.9V	0.9V	0.9V	0.9V	0.9V	0.6V	0.6V	1.7V
AM	0.9V	0.9V	0.9V	0.9V	0.9V	0.6V	0.6V	1.7V
	9	10	11	12	13	14	15	16

Figure 28

8-2. SCHEMATIC DIAGRAM

— TUNER PACK SECTION —

Q001

	1	2	3	4	5	6	7	8
FM	0V	1.7V	2.5V	2.5V	1.7V	2.5V	2.5V	2.5V
AM	0V	0V	0.2V	0.2V	0V	0.2V	0.2V	0.2V
FM	0V	2.5V	0V	2.2V	0.4V	0V	1.3V	0V
AM	0V	0.2V	0V	0.2V	0.4V	0V	1.3V	0V
	9	10	11	12	13	14	15	16

Q101

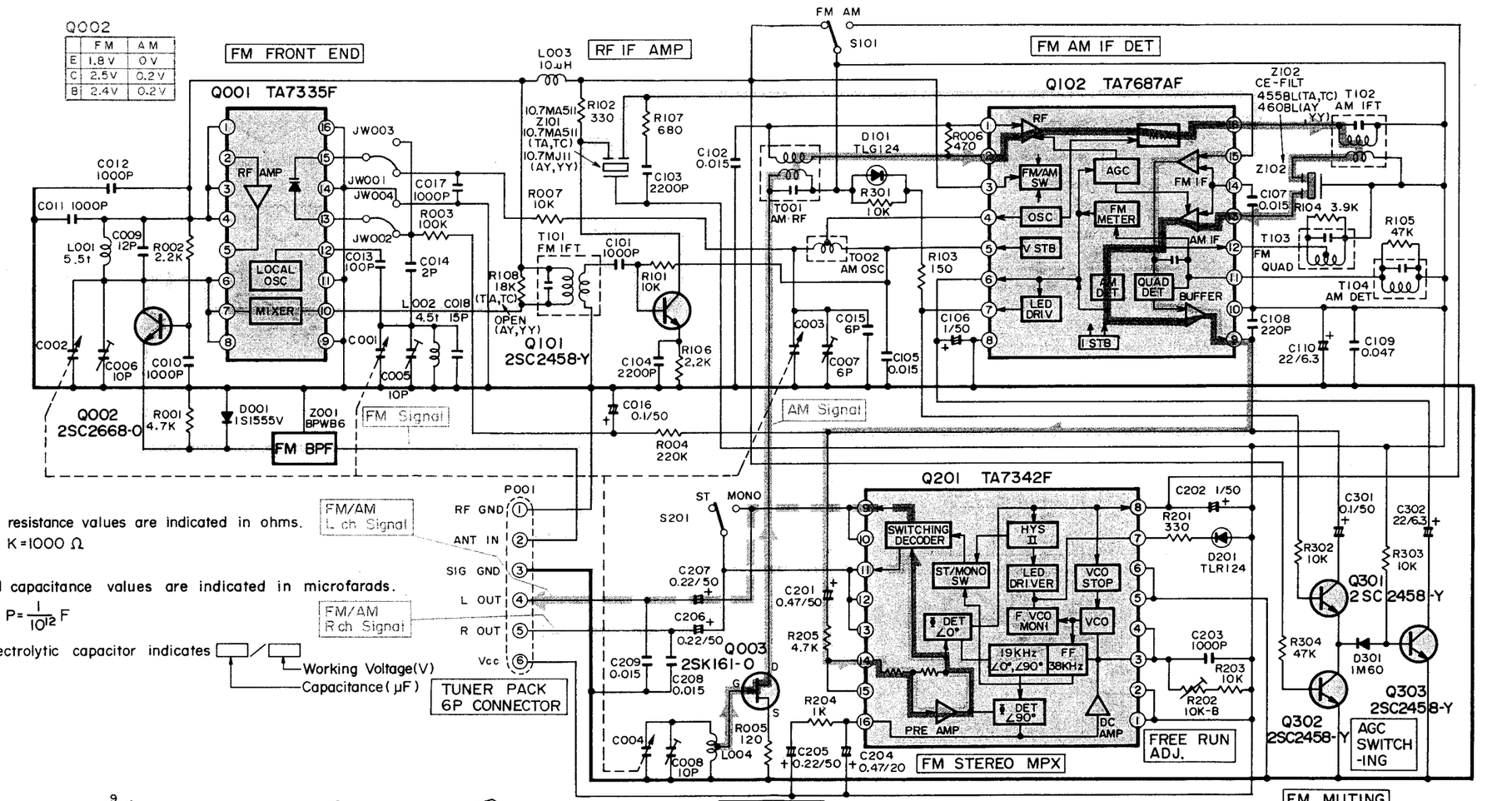
	FM	AM
E	0.8V	0.2V
C	2.4V	0.2V
B	1.3V	0.7V

Q102

	1	2	3	4	5	6	7	8
FM	0.05V	0.05V	2.5V	1.4V	1.4V	0.1V	1.5V	0V
AM	0.9V	0.9V	0.2V	1.4V	1.4V	0V	2.4V	0V
FM	0.9V	2.5V	2.5V	2.5V	2.2V	2.2V	2.2V	2.5V
AM	1.1V	2.5V	2.5V	2.5V	2.1V	2.2V	2.4V	2.5V
	9	10	11	12	13	14	15	16

Q002

	FM	AM
E	1.8V	0V
C	2.5V	0.2V
B	2.4V	0.2V



Notes

1. All resistance values are indicated in ohms.
   K=1000 Ω
2. All capacitance values are indicated in microfarads.
   $P=\frac{1}{10^{12}}F$
3. Electrolytic capacitor indicates
   Working Voltage(V)
   Capacitance(μF)

Q003

	FM	AM
D	2.5V	2.5V
G	0V	0V
S	0.2V	0.1V

Q201

	1	2	3	4	5	6	7	8
FM	2.5V	2.5V	2.1V	2.1V	0V	0V	1.5V	1.7V
AM	2.5V	2.5V	1.8V	1.8V	0V	0V	1.8V	2.5V
FM	0.9V	0.9V	0.9V	0.9V	0.9V	0.6V	0.6V	1.7V
AM	0.9V	0.9V	0.9V	0.9V	0.9V	0.6V	0.6V	1.7V
	9	10	11	12	13	14	15	16

Q301

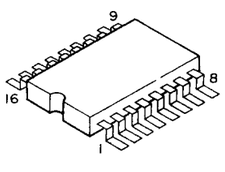
	FM	AM
E	0.05V	1.7V
C	0.05V	1.7V
B	0.6V	2.2V

Q303

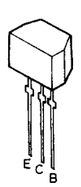
	FM	AM
E	0V	0V
C	0V	0V
B	0.2V	0.6V

Q302

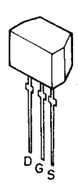
	FM	AM
E	0V	0V
C	0.05V	1.7V
B	0.6V	0.2V



TA7335F
TA7342F
TA7687AF



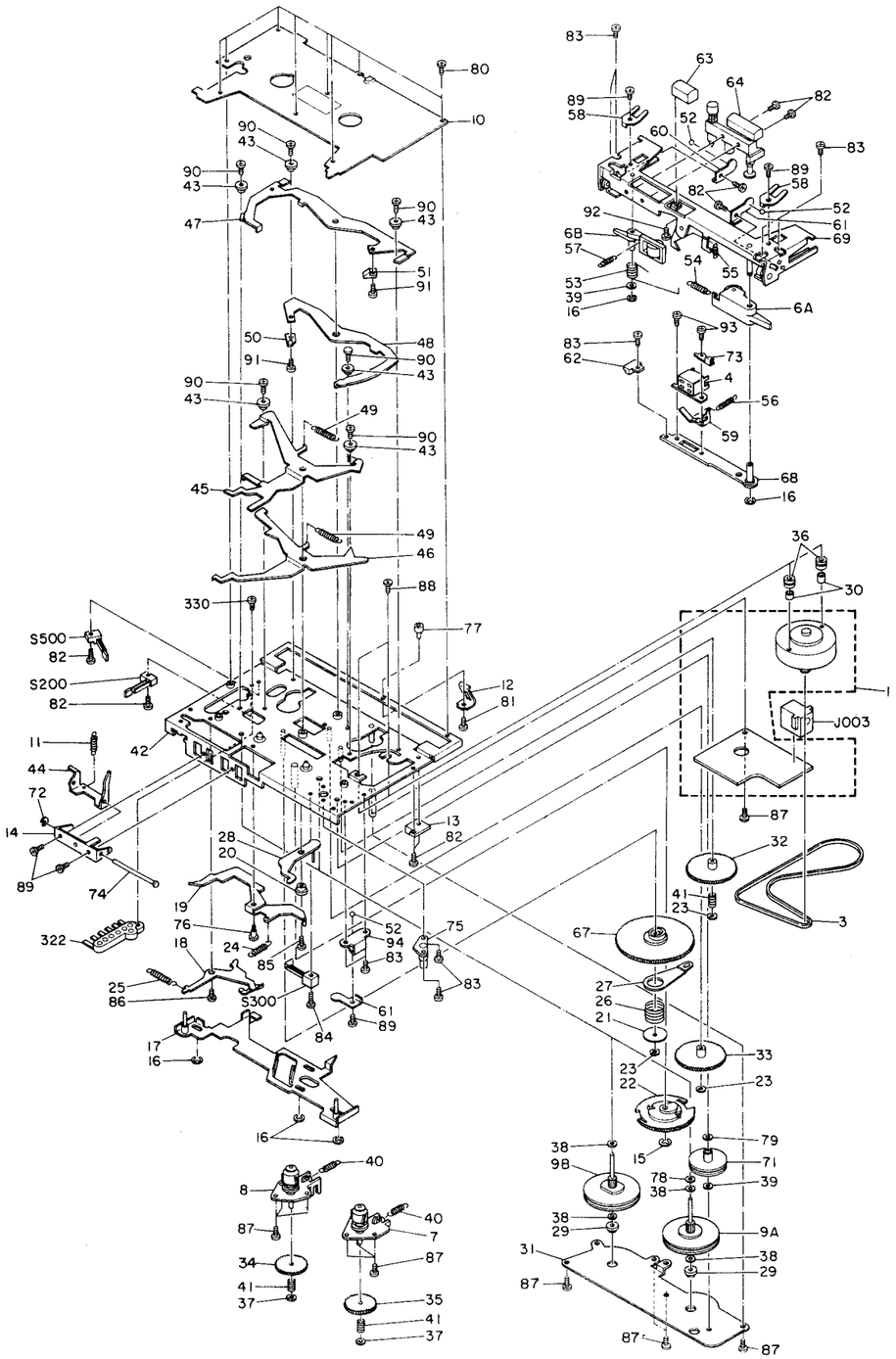
2SC2458-Y



2SK160-O

Figure 29

9. MECHANISM EXPLODED VIEW



NOTE: Parts excluded in the parts list are not available as replacement parts.

10-1. CABINET EXPLODED VIEW

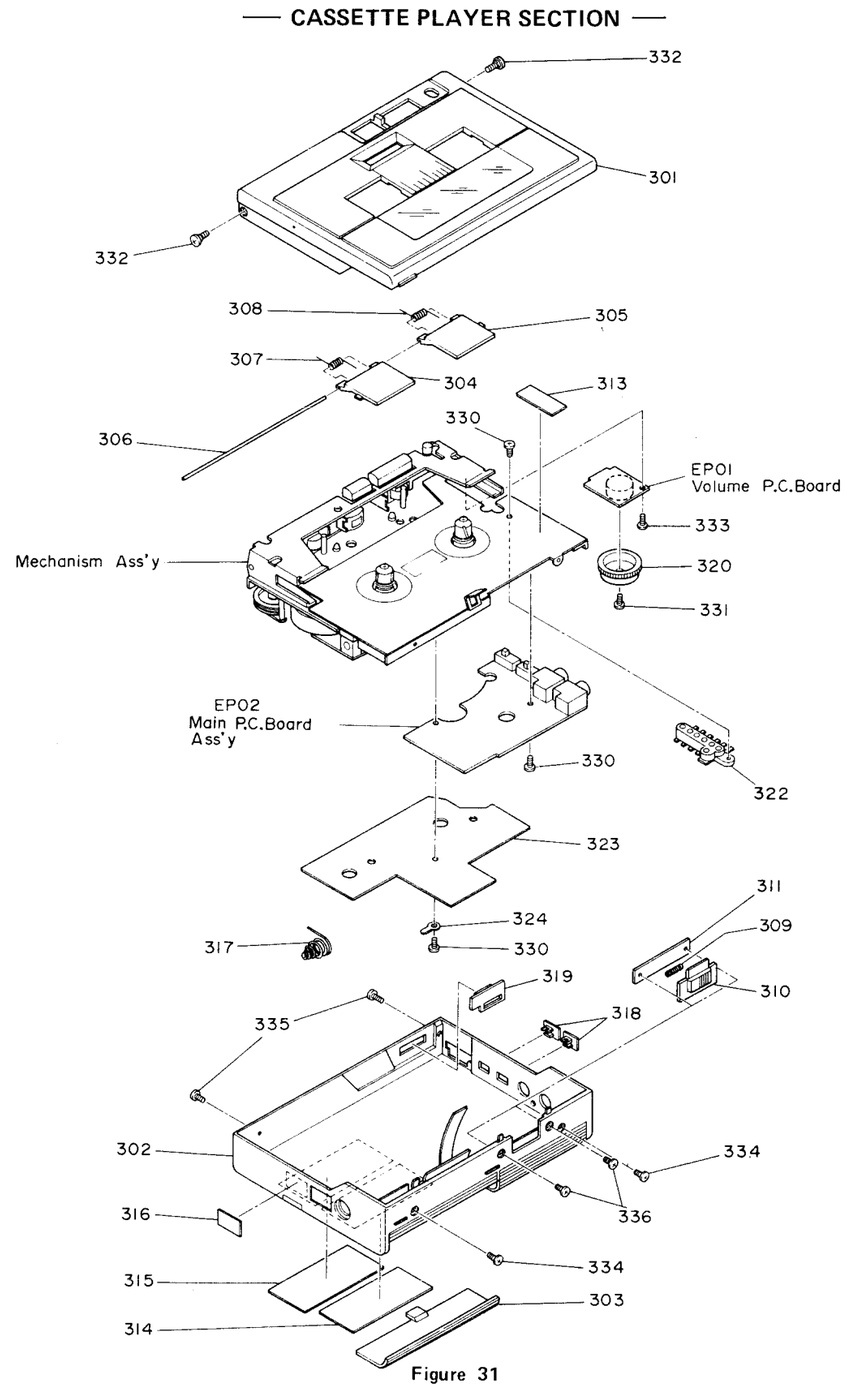


Figure 31

NOTE: Parts excluded in the parts list are not available as replacement parts.

11-1. PARTS LIST

— CASSETTE PLAYER SECTION —

Symbol No.	Part No.	Description
		MECHANISM PARTS
1	22125833	Motor Ass'y
3	25755573	Belt, Main
4	22217423	Play Head, HRPT-423
6A	25717561	Pressure Roller Ass'y, Right
6B	25717559	Pressure Roller Ass'y, Left
7	25712432	Reel Plate Ass'y, Right
8	25712433	Reel Plate Ass'y, Left
9A	25717562	Flywheel Ass'y, Right
9B	25717563	Flywheel Ass'y, Left
10	25734482	Mechanism Cover
11	25776571	Spring
12	25779326	Spring
13	25781253	Holder, Jack
15	22703118	E Ring, 2ϕ
16	25735254	E Ring, 1.5ϕ
18	25791620	Reverse Release Lever Ass'y
19	25791621	Reverse Operation Lever Ass'y
20	25726677	Boss
21	25754442	Washer
22	25756348	Gear, Reverse Cam
23	25766050	Washer
24	25776565	Spring
25	25776567	Spring
26	25777178	Spring
27	25784051	Lever, Frict
28	25784052	Lever, Reverse Detector
29	25725445	Holder, Flywheel Ass'y, Left
30	25726673	Spacer, Motor
32	25756346	Gear, FF. Relay
33	25756347	Gear, Play Relay
34	25756351	Gear, Play Left
35	25756352	Gear, Play Right
36	25761492	Cushion, Motor
37	25766079	Washer, 1.2ϕ
38	25766082	Washer, 2ϕ
39	25766100	Washer, 2.1ϕ
40	25776566	Spring
41	25777130	Spring
42	25791622	Main Chassis Ass'y
43	25726655	Boss
44	25748944	Lever, Play
45	25748945	Lever, Stop
46	25748946	Lever, Switch
47	25748947	Play Cut Lever, Left
48	25748948	Play Cut Lever, Right
49	25776569	Spring
50	25783318	Chip, Play Cut Lever, Right
51	25783319	Chip, Play Cut Lever, Left
52	25757129	Steel Ball
53	25775254	Spring
54	25776580	Spring
55	25776568	Spring
56	25776600	Spring
57	25776572	Spring
58	25779268	Spring, Cassette Holder
59	25779325	Spring, Azimuth
60	25779327	Spring
61	25779328	Spring
62	25783322	Tape Guide
63	25783324	Button, Stop
64	25716312	Button Ass'y
67	25791568	Take-up Gear Ass'y
68	25717567	Head Lever Ass'y
69	25791626	Cassette Holder Ass'y
71	25713579	Pulley Relay Ass'y
72	25766136	Washer
78	25766099	Washer
79	25766135	Washer
80	22707678	Screw, 1.4ϕ x 1.6mm, FLT, BLK
81	22707969	Screw, 1.4ϕ x 1.2mm, PAN, BLK
82	22707978	Screw, 1.7ϕ x 2.5mm, PAN, BLK
83	22707862	Screw, 1.7ϕ x 2mm, PAN, BLK
84	22707737	Screw, 1.7ϕ x 6mm, PAN FL, Chrome
85	22707496	Screw, 1.4ϕ x 2.5mm, PAN, BLK
86	22707971	Screw, 1.4ϕ x 1.8mm, PAN, BLK
87	22707832	Screw, 1.4ϕ x 2.5mm, PAN, BLK
88	22707970	Screw, 1.7ϕ x 3mm, PAN, BLK
89	22707830	Screw, 1.7ϕ x 1.6mm, PAN, BLK
90	22707956	Screw, 1.4ϕ x 1.6mm, PAN, BLK
91	22707967	Screw, 1.4ϕ x 1.2mm, PAN, BLK
92	22707422	Screw, Special
93	22707968	Screw, 2ϕ x 2.5mm, PAN

Symbol No.	Part No.	Description
		CABINET PARTS TA, TC, AY, FY ... S YY ... S, W, R S ... Silver, W ... White, R ... Red
301	25881944	Cabinet Ass'y, Front
301	25881989	Cabinet Ass'y, Front (YY ... W)
301	25881990	Cabinet Ass'y, Front (YY ... R)
302	25881888	Cabinet Ass'y, Back
302	25881887	Cabinet Ass'y, Back (YY ... W)
302	25881889	Cabinet Ass'y, Back (YY ... R)
303	25882223	Battery Cover
303	25882163	Battery Cover (YY ... W)
303	25882226	Battery Cover (YY ... R)
304	25837981	Button A
305	25837982	Button B
306	25847271	Button Shaft
307	25847272	Spring, Button
308	25847279	Spring, Button B
309	25777149	Spring, Lock
310	25837787	Button, Lock
311	25846594	Button Holder
313	22900142	Label, Caution, C-R2-E
314	22900267	Name Label
314	22900288	Name Label (YY ... R)
315	22900268	Label, Dolby-E
315	22900289	Label, Dolby-E-R (YY ... R)
317	25777236	Spring, Battery
318	25837983	Knob, Tape Select, Dolby NR
319	25837984	Knob, Reverse Select
320	25837985	Knob, Volume
322	25781251	Connector
330	22707612	Screw, 1.4ϕ x 3mm, PAN FL, BLK
331	22707680	Screw, 1.7ϕ x 3mm, BLK
332	22707850	Screw, Special
333	22707862	Screw, 1.7ϕ x 2mm, PAN
334	22707866	Screw, 1.7ϕ x 2.5mm, PAN, Chrome
335	22707965	Screw, 1.7ϕ x 2.5mm, PAN, Chrome
336	22707740	Screw, 1.4ϕ x 2.5mm, PAN, Chrome

Symbol No.	Part No.	Description
		TRANSISTORS, ICS AND DIODES
Q301	B0356885	IC, TA7688F
Q401	22117162	IC, BA3404F
Q451	22117161	IC, NJM2063M
Q453, 454	A6043330	Transistor, 2SK209-Y
Q901, 902, 903	A6335480	Transistor, 2SC2712-GR
Q905	A6541140	Transistor, 2SA1162-GR
D901	22115533	Diode, 1SS53
D902	22115782	Diode, LED, SLP102B-01
		ELECTRICAL PARTS
S100	22196181	Switch, Slide, Tape Select
S200	22196222	Switch, Leaf, AUTO/REVERSE
S300	22196221	Switch, Leaf, Muting
S400	22196182	Switch, Slide, Dolby NR
S500	22196222	Switch, Leaf, Power
J001, 002	22163947	Jack, 3.5ϕ Stereo Headphone
J003	22163936	Jack, DC Power
L301	22292153	Coil, Choke, RT-2153
L302	22241068	Coil, Choke
L303	22241070	Coil, Choke
EP01	22192270	P.C. Board, Volume
EP02	22192346	P.C. Board Ass'y, Main
		CAPACITORS D = ±0.5pF, J = ±5%, K = ±10%, M = ±20%, Z = −20 + 80% ABBREVIATIONS: BL = Barrier Layer, EL = Electrolytic PS = Polytylene, TT = Tantalum
C301, 302	22353391	Chip, 390pF, 50V, K
C303, 304	22490068	TT, 1mfd, 16V
C305, 306	22440516	EL, 220mfd, 4V
C307	22351100	Chip, 10pF, 50V, D
C308	22351470	Chip, 47mfd, 50V, K
C309	22360367	CD, 2200pF, 50V, K
C401, 402, 403, 404	22353391	Chip, 390pF, 50V, K
C405, 406	22440540	EL, 22mfd, 4V
C407, 408	22380266	PS, 0.01mfd, 50V, J
C409, 410	22490071	TT, 3.3mfd, 6.3V
C453, 454	22353682	Chip, 6800pF, 50V, K

Symbol No.	Part No.	Description
C455, 456	22354473	Chip, 0.047mfd, 25V, M
C457, 458	22380267	PS, 0.033mfd, 50V, J
C459, 460	22352472	Chip, 4700pF, 50V, Z
C461, 462	22490066	TT, 0.47mfd, 16V
C463, 464	22490069	TT, 2.2mfd, 6.3V
C901	22352104	Chip, 0.1mfd, 25V, Z
C902	22440542	EL, 47mfd, 4V
C903	22490078	TT, 4.7mfd, 6.3V
C904	22440542	EL, 47mfd, 4V
C906	22490080	TT, 6.8mfd, 6.3V
C907	22440540	EL, 22mfd, 4V
C908	22440517	EL, 100mfd, 4V
RESISTORS Chip Resistors are Metal Oxide Resistor 1/8W, ±5%, others are Carbon Film 1/8W, ±5%, unless otherwise noted. K = 1000, M = 1000000.		
R301, 302	22531229	2.2 ohm, Chip, ±10%
R303	22531822	8.2K ohm, Chip
R391	22611405	10K ohm, Variable Volume
R405, 406	22531221	220 ohm, Chip
R407, 408	22531304	300K ohm, Chip
R409, 410	22531133	13K ohm, Chip
R411, 412	22531163	16K ohm, Chip
R451, 452	22531133	13K ohm, Chip
R453, 454	22531103	10K ohm, Chip
R455, 456	22531332	3.3K ohm, Chip
R457, 458	22531473	47K ohm, Chip
R459, 460	22531474	470K ohm, Chip
R461, 462	22531123	12K ohm, Chip
R463, 464	22531472	4.7K ohm, Chip
R491, 492	22658672	330 ohm, Semi-Fixed Variable
R901, 902, 903	22531106	10M ohm, Chip
R904	22531472	4.7K ohm, Chip
R905	22531223	22K ohm, Chip
R906	22531473	47K ohm, Chip
R910	22531103	10K ohm, Chip
R911	22531223	22K ohm, Chip
R912	22531392	3.9K ohm, Chip
R913	22531391	390 ohm, Chip

10-2. CABINET EXPLODED VIEW

— TUNER PACK SECTION —

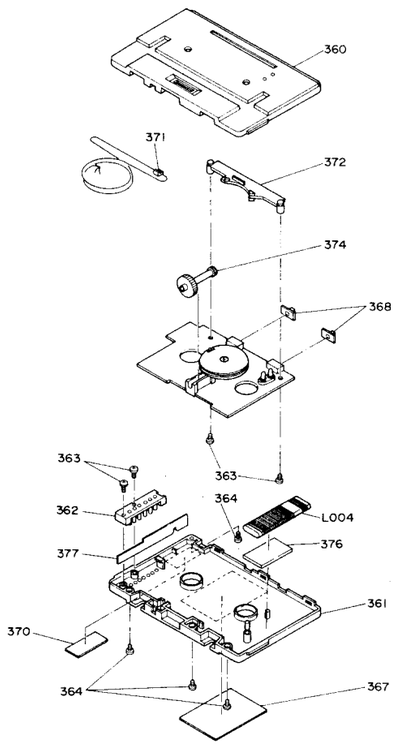


Figure 32

11-2. PARTS LIST — TUNER PACK SECTION —

Symbol No.	Part No.	Description
CABINET PARTS		
360	22881213	Cabinet, Upper
361	22882038	Cabinet, Bottom
362	22161726	Contact 6P
363	22707638	Screw, 1.7ϕ x 4.5mm, BID, BLK
364	22707662	Screw, Special
367	22866211	Name Label, TA, TC
367	22866212	Name Label, AY, YY
368	22884242	Cap, Knob
370	22900142	Label, Caution
371	22741393	Pointer

Symbol No.	Part No.	Description
TRANSISTOR, ICS AND DIODES		
Q001	B0325275	IC, TA7335F
Q002	A6332530	Transistor, 2SC2688-O
Q003	A6042620	Transistor, FET, 2SK161-O
Q101	A6332430	Transistor, 2SC2458-Y
Q102	B0356876	IC, TA7687AF
Q201	B0325335	IC, TA7342F
Q301, 302, 303	A6332430	Transistor, 2SC2458-Y
D001	A7246703	Diode, 1S1555V
D101	A8606201	Diode, LED, TLG-124A
D201	A8601150	Diode, LED, TLR-124
D301	22115863	Diode, 1M60

Note: The Tuner Pack for "FY" is optional.

Symbol No.	Part No.	Description
ELECTRICAL PARTS		
L001	22295141	Coil, LH010-5.5T
L002	22295151	Coil, LH010-AF2
L003	22241067	Coil, CH1067
L004	22242918	Coil, AM Antenna
T001	22264864	IF Transformer, AM, RF
T002	22245414	Coil, AM
T101	22265837	IF Transformer, FM
T102	22264865	IF Transformer, AM
T103	22267419	IF Transformer, FM, Guard
T104	22266388	IF Transformer, AM, Detector
Z001	22153222	Filter, FM, Band-Pass, BPMB6
Z101	22153260	Filter, Ceramic, FM, 10.7MA511, TA, TC
Z101	22153261	Filter, Ceramic, FM, 10.7MJ11, AY, YY
Z102	22153206	Filter, Ceramic, AM, TER-455BL, TA, TC
Z102	22153220	Filter, Ceramic, AM, TER-460BL, AY, YY
S101 ∿ 102	22196060	Switch, AM, FM Select
S201 ∿ 202	22196060	Switch, MONO, ST Select
CAPACITORS D = ±0.5pF, J = ±5%, K = ±10%, M = ±20% ABBREVIATIONS: CD = Ceramic Disk, EL = Electrolytic TT = Tantalum, BL = Barrier Layer, PS = Polystylene		
C001, 002, 003, 004	22308560	Poly Variable Capacitor
C005	22309191	Trimmer, 10pF
C006	22309191	Trimmer, 10pF
C007	22309190	Trimmer, 6pF
C008	22309159	Trimmer, 10pF
C009	22361120	CD, 12pF, 50V, J
C010, 011, 012	22349102	CD, 1000pF, 50V, K
C013	22362101	CD, 100pF, 50V, K
C014	22360478	CD, 2pF, 50V, D
C015	22361609	CD, 6pF, 50V, D
C016	22440439	EL, 0.1mfd, 50V
C017	22349102	CD, 1000pF, 50V, K
C018	22360177	CD, 15pF, 50V, J
C101	22349102	CD, 1000pF, 50V, K

Symbol No.	Part No.	Description
C102	22360605	BL, 0.015mfd, 25V, M
C103, 104	22360723	BL, 2200pF, 25V, M
C105	22360605	BL, 0.015mfd, 25V, M
C106	22440441	EL, 1mfd, 50V
C107	22360605	BL, 0.015mfd, 25V, M
C108	22349221	CD, 220pF, 50V, K
C109	22360608	BL, 0.047mfd, 25V, M
C110	22440277	EL, 22mfd, 6.3V
C201	22440440	EL, 0.47mfd, 50V
C202	22440441	EL, 1mfd, 50V
C203	22380071	PS, 1000pF, 125V, J
C204	22490106	TT, 0.47mfd, 20V
C205, 206, 207	22440320	EL, 0.22mfd, 50V
C208, 209	22360605	BL, 0.015mfd, 25V, M
C301	22440439	EL, 0.1mfd, 50V
C302	22440277	EL, 22mfd, 6.3V
RESISTORS All resistors are carbon film 1/6W, ±5%, unless otherwise noted. K = 1000, M = 1000000.		
R001	22584472	4.7K ohm
R002	22584222	2.2K ohm
R003	22584104	100K ohm
R004	22584224	220K ohm
R005	22584121	120 ohm
R006	22584471	470 ohm
R007	22584103	10K ohm
R101	22584103	10K ohm
R102	22584331	330 ohm
R103	22584151	150 ohm
R104	22584392	3.9K ohm
R105	22584473	47K ohm
R106	22584222	2.2K ohm
R107	22584681	680 ohm
R108	22584183	18K ohm, (TA, TC only)
R201	22584331	330 ohm
R202	22658654	10K ohm, Semi-fixed Variable Resistor
R203	22584103	10K ohm
R204	22584102	1K ohm
R205	22570402	4.7K ohm, 1/16W, J
R301, 302, 303	22584103	10K ohm
R304	22584473	47K ohm

12-1. HEADPHONE EXPLODED VIEW

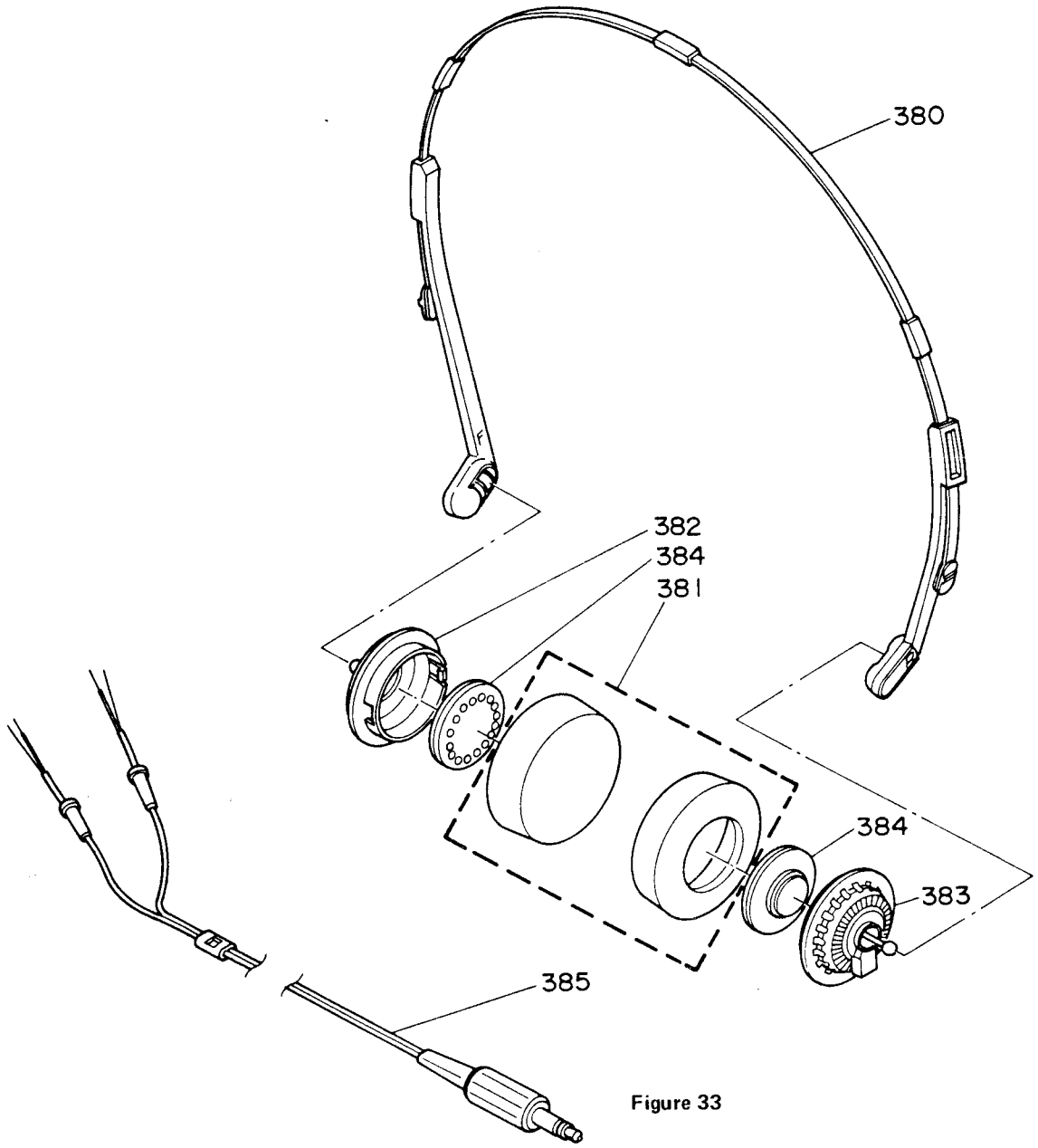


Figure 33

12-2. HEADPHONE PARTS LIST

Symbol No.	Part No.	Description
380	22810080	Head Band Ass'y
381	22810081	Ear Pad Ass'y
382	22810082	Housing, L
383	22810083	Housing, R
384	22810084	Driver Unit
385	22810085	Cord Ass'y with Plug

13-1. BATTERY PACK EXPLODED VIEW

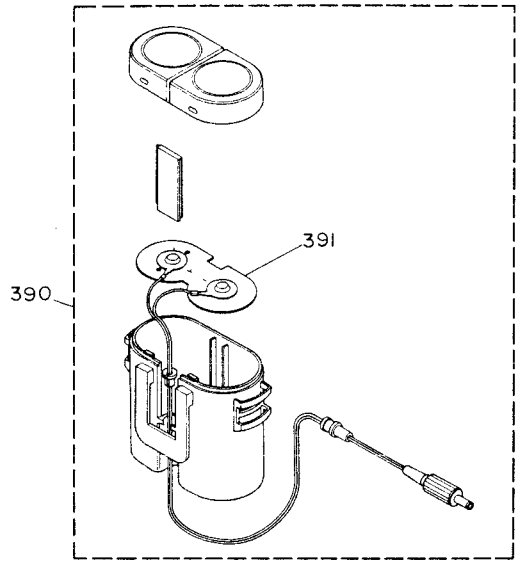


Figure 34

13-2. BATTERY PACK PARTS LIST

Symbol No.	Part No.	Description
390	25881500	Battery Pack
391	25881579	Cord Ass'y with Plug and Battery Contact

14-1. UNIT HOLDER EXPLODED VIEW

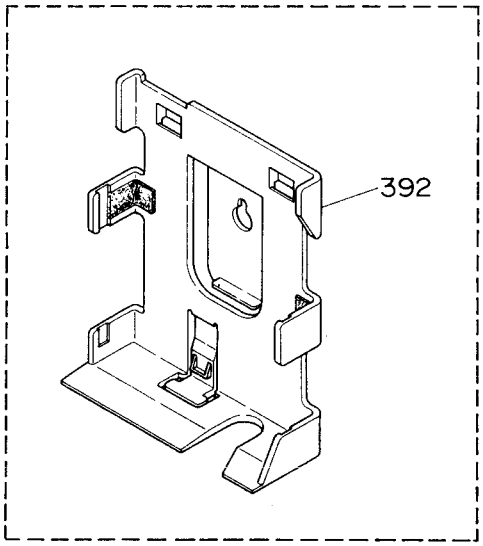


Figure 35

14-2. UNIT HOLDER PARTS LIST

Symbol No.	Part No.	Description
392	22991112	Unit Holder Ass'y

15. ACCESSORIES PARTS LIST

Symbol No.	Part No.	Description
AC01	22903609	Owner's Manual, TA
AC01	22903610	Owner's Manual, TC
AC01	22903611	Owner's Manual, AY
AC01	22903612	Owner's Manual, YY, FY
AC02	22991102	Belt

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